VACCINE STANDING ORDERS

VACCINE	BRAND NAME	DATE LICENSED	COMPANY
EIPV	IPOL	12-01-90	Sanofi Pasteur
DTaP	Tripedia	07-31-96	Sanofi Pasteur
DTaP	Daptacel	05-14-02	Sanofi Pasteur
DTaP	Infanrix	01-29-97	GlaxoSmithKline
DTaP-HepB-EIPV	Pediarix	12-20-02	GlaxoSmithKline
DTaP-Hib	Trihibit	09-27-96	Sanofi Pasteur
DT	DT	09-18-84	Sanofi Pasteur
Td	Td	01-03-78	Sanofi Pasteur
Tdap	Boostrix	05-17-05	GlaxoSmithKline
Tdap	ADACEL	06-10-05	Sanofi Pasteur
Hepatitis B	Engerix-B	08-28-89	GlaxoSmithKline
Hepatitis B	Recombivax HB	07-23-86	Merck
Hib-HepB	Comvax	10-02-96	Merck
Hib	ACTHib	03-30-93	Sanofi Pasteur
Hib	PedvaxHIB	12-20-89	Merck
Hepatitis A	Havrix	02-22-95	GlaxoSmithKline
Hepatitis A	Vaqta	03-29-96	Merck
MMR	MMR II	04-22-71	Merck
Varicella	Varivax	03-17-95	Merck
MMRV	ProQuad	09-06-05	Merck
PCV7	Prevnar	02-01-00	Wyeth
Influenza	Fluzone (Split Virus)	12-09-99	Sanofi Pasteur
Influenza	Fluzone FluMist	12-09-99	Sanofi Pasteur
MCV4	Menactra	01-14-05	Sanofi Pasteur
Rotavirus	RotaTeq	02-03-06	Merck

VACCINE ADMINISTRATION

The recommendations on route, site, and dosages of immunobiologics are derived from theoretical considerations, experimental trials, and clinical experience. The Advisory Committee on Immunization Practices (ACIP) **strongly discourages** any variations from the recommended route, site, volume, or number of doses of any vaccine.

For all intramuscular (IM) injections , the needle should be long enough to reach the muscle mass and prevent vaccine from seeping into subcutaneous tissue. An individual decision on needle size and site of injection must be made for each person based on **age**, the **volume** of the material to be administered, the **size of the muscle**, and the **depth below the muscle surface** into which the material is to be injected.

Subcutaneous (SQ) injections are usually administered into the thigh of infants and in the deltoid area of older children and adults. A ½ to ¾ inch, 23 to 25 gauge needle should be inserted into the tissues below the dermal layer of the skin.

The anterolateral aspect of the thigh is the recommended site for intramuscular injections of infants.

The deltoid may be used for intramuscular injections of toddlers (**if the muscle mass is adequate**), and older children.

Source: Centers for Disease Control and Prevention. General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1994:43 (No. RR-1): 6-8.

Kansas Immunization Program/Recommendations for IM/SQ Injections

AGE	ROUTE	SITE	NEEDLE GAUGE	NEEDLE LENGTH
Infants	IM SQ	Thigh Thigh	22-25 23-25	⅞-1 inch ⅝-¾ inch
Toddlers	IM SQ	Thigh Deltoid	22-25 23-25	⅞-1¼ inches ⅝-¾ inch
Older Children	IM SQ	Deltoid Deltoid	22-25 23-25	⅞-1¼ inches ⅝-¾ inch
Adults	IM SQ	Deltoid Deltoid	20-25 23-25	1-1½ inches ⅝-¾ inch

Enhanced Potency Inactivated Poliomyelitis Vaccine (EIPV)

Manufacturer	Sanofi Pasteur	
Brand Name	IPOL	
Formulation	10-dose vial	
Dosage	0.5ml	
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.	
Injection Site	Anterolateral aspect of the upper thigh or deltoid	
Route	Subcutaneous (SC)	Intramuscular (IM)
Needle Size	23 to 25 gauge, ⅝ to ¾ inch	22 to 25 gauge, ⅞ to 1 1/4 inches
Administration	May be administered simultaneously or at any interval between doses of Inactivated or live antigen.	

Routine IPV schedule for polio vaccination of children:*

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6-18 months	4 weeks after second dose
4	4-6 years	4 weeks after the third dose. The fourth dose is not necessary if the third dose is administered on or after the 4th birthday.

*The Advisory Committee on Immunization Practices recommends an all EIPV schedule for routine childhood polio vaccination in the United States. OPV(if available) may be used for the following special circumstances:
1. Mass vaccination campaigns to control outbreaks of paralytic polio.
2. Unvaccinated children who will be traveling in <4weeks to areas where polio is endemic or epidemic.
3. Children of parents who do not accept the recommended number of vaccine injections. These children may receive OPV only for the third or fourth dose or both; in this situation, health-care providers should administer OPV only after discussing the risk for VAPP with parents or caregivers.
4. During the transition to an all IPV schedule, recommendations for the use of remaining OPV supplies in physicians' offices and clinics have been issued by the American Academy of Pediatrics.

Contraindications to EIPV vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction to a previous dose of IPV
3. Anaphylactic reaction to streptomycin or neomycin

Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP)

Manufacturer	Sanofi Pasteur
Brand Name	Tripedia
Formulation	10 one-dose vials
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Detailed schedule for Tripedia vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	4 weeks after second dose
4*	15-18 months	6 months after third dose
5	4-6 years	6 months after the fourth dose. The fifth dose is not necessary if the fourth dose is administered on or after the 4th birthday.

*The 4th dose of DTaP may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.
*If any of the first four doses were a DTP, any licensed DTaP vaccine may be administered for the fifth dose.

Contraindications to DTaP vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Encephalopathy, not due to another cause, occurring within 7 days following DTP/DTaP vaccination.
4. Anaphylactic reaction to thimerosal.

Precautions to DTaP vaccination:

1. Temperature equal to or greater than 40.5º C (105º F) within 48 hours of previous DTP/DTaP vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.
5. Progressive or evolving neurologic disorder.

Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DAPTACEL)

Manufacturer	Sanofi Pasteur
Brand Name	DAPTACEL
Formulation	10 one-dose vials
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Detailed schedule for DAPTACEL vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	4 weeks after second dose
4*	15-18 months	6 months after third dose

*The 4th dose of DAPTACEL may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.
*DAPTACEL is licensed for the first 4 doses in the schedule.
*If any of the first four doses were a DTP, any licensed DTaP vaccine may be administered for the fifth dose. Currently, licensed for the first four doses.

A different brand of DTaP may be used to complete the series if necessary. No efficacy or safety data is available for this schedule.

Contraindications to DTaP vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Encephalopathy, not due to another cause, occurring within 7 days following DTP/DTaP vaccination.
4. Anaphylactic reaction to thimerosal.
5. Anaphylactic reaction to latex.

Precautions to DTaP vaccination:

1. Temperature equal to or greater than 40.5º C (105º F) within 48 hours of previous DTP/DTaP vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.
5. Progressive or evolving neurologic disorder.

Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP)

Manufacturer	GlaxcoSmithKline
Brand Name	Infanrix
Formulation	10 1-dose vials
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for DTaP vaccination for children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	4 weeks after second dose
4*	15-18 months	6 months after third dose
5	4-6 years	6 months after the fourth dose. The fifth dose is not necessary if the fourth dose is administered on or after the 4th birthday.

*The 4th dose of DTaP may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.

* **May use different brand if necessary to complete the series**. No efficacy or safety data available to this schedule.

*If any of the first four doses were a DTP, any licensed DTaP vaccine may be administered for the fifth dose.

Contraindications to DTaP vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine.
3. Encephalopathy, not due to another cause, occurring within 7 days following DTP/DTaP vaccination.
4. Anaphylactic reaction to thimerosal.

Precautions to DTaP vaccination:

1. Temperature equal to or greater than 40.5º C (105º F) within 48 hours of previous DTP/DTaP vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.
5. Progressive or evolving neurologic disorder.

Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP)
Hepatitis B Vaccine, Recombinant (HepB)
Inactivated Poliomyelitis Vaccine (EIPV)

Manufacturer	GlaxoSmithKline
Brand Name	PEDIARIX
Formulation	5 one-dose vials Single dose Tip-Lok syringe (no needle)
Dosage	0.5 ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze.**
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses of inactivated or live antigen.

Routine DTaP/HepB/EIPV Combination schedule for vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	8 weeks after second dose

1.PEDIARIX is interchangeable with all US-licensed **EIPV** and **HepB** vaccines
2.PEDIARIX is indicated to complete the first 3 doses of the primary series in infants who started the series with ***Infanrix***.
3.Because the pertussis antigen components of PEDIARIX are the same as those in INFANRIX, these children should receive INFANRIX as their fourth and fifth dose of DTaP.
4.**However, if previously administered DTaP vaccine cannot be determined or is not available, any licensed DTaP vaccine may used to complete the series.** No efficacy or safety data is available for this schedule.
5.A birth dose of monovalent hepatitis B vaccine remains a part of the infant immunization schedule when PEDIARIX is used. Although not labeled for this indication by FDA, PEDIARIX may be used in infants whose mothers are HBsAg positive or whose HBsAg status is not known.
6.Children who have received a 3-dose primary series of PEDIARIX should receive a fourth dose of EIPV at 4 to 6 years of age.
7.PEDIARIX may be administered at 2,4, and 6 months to infants who received a birth dose of hepatitis B vaccine (total of 4 doses of hepatitis B vaccine)

Contraindications to DTaP/HepB/EIPV Combination vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following a prior dose of vaccine
3. Hypersensitivity to yeast, neomycin or polymyxin B
4. Encephalopathy, not due to another cause, occurring within 7 days following a DTP/DTaP vaccination.

Precautions to DTaP/HepB/EIPV Combination vaccination:

1. Fever equal to or greater than 40.5º C (105º F) within 48 hours of previous DTP/DTaP vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.
5. Progressive or evolving neurologic disorder.

Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP)
Haemophilus Influenzae type B Vaccine (Hib)

Manufacturer	Sanofi Pasteur
Brand Name	Trihibit
Formulation	5 vials of ACT-Hib (1 dose each) and 5 vials of Tripedia (1 dose each) ACT-Hib must be reconstituted with 0.6ml of Tripedia
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Detailed schedule for Trihibit vaccination of children:

Dose	Customary Age	Minimum Interval
4*	15-18 months	6 months after third dose

*Trihibit is **only** licensed for the 4th dose of the primary vaccinating series for children 15-59 months of age.
*The 4th dose of DTaP may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.

Contraindications to DTaP-Hib vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of the vaccine.
3. Encephalopathy, not due to another cause, occurring within 7 days following DTP, DTaP, or DTaP-Hib vaccination.
4. Anaphylactic reaction to thimerosal.

Precautions to DTaP-Hib vaccination:

1. Temperature equal to or greater than 40.5º C (105º F) within 48 hours of previous DTP, DTaP, or DTaP-Hib vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hypo-responsive episode) within 48 hours of previous DTP, DTaP, or DTaP-Hib vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP, DTaP, or DTaP-Hib vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP, DTaP, or DTaP-Hib vaccination.
5. Progressive or evolving neurologic disorder.

Diphtheria Toxoid-Tetanus Toxoid (DT) Pediatric Formulation

Manufacturer Sanofi Pasteur

Brand Name DT

Formulation 10-dose vial

Dosage 0.5ml

Storage Store at 2º-8º C (35º-46º F). **Do not freeze**.

Injection Site Anterolateral aspect of upper thigh or deltoid

Route Intramuscular (IM)

Needle Size 22 to 25 gauge , ⅞ to 1¼ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for DT vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	4 weeks after second dose
4*	15-18 months	6 months after third dose
5	4-6 years	6 months after the fourth dose. The fifth dose is not necessary if the fourth dose is administered on or after the 4th birthday.

*The 4th dose of DT may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.

Note: DTaP is the vaccine preferred for primary immunization of infants and children up to 7 years of age. If there is a true medical contraindication to pertussis vaccine, DT should be used.

Contraindications to DT vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Persons 7 years of age and older should **not** be immunized with DT.

Diphtheria Toxoid-Tetanus Toxoid (Td) Adult Formulation

Manufacturer	Sanofi Pasteur
Brand Name	Td
Formulation	Single-dose syringe and/or single-dose vial
Dosage	0.5 ml
Storage	Store at 2-8º C (35-46º F). **Do not freeze**.
Injection Site	Anterolateral aspect of upper thigh or deltoid.
Route	Intramuscular (IM)
Needle Size	20 to 25 gauge, 1 to 1½ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for Td vaccination of adults and children 7 years of age and older:

Dose	Minimum Interval
1	7 years of age and older
2	4 weeks after first dose
3	6 months after second dose
Booster	Repeat every 10 years or at 11-12 year-old assessment as recommended by ACIP

Contraindications to Td vaccination:

1. Moderate to severe febrile illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine.
3. Only persons 7 years of age and older should be immunized with Td. DTaP is the vaccine recommended for children 6 weeks through 6 years of age up to 7 years of age.

Rev. 4/6/06

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine – Tdap (Preservative Free)

Manufacturer: GlaxoSmithKline

Brand Name: Boostrix

Formulation: Single dose vials and disposable prefilled Tip-Lok syringes

Dosage: 0.5ml

Storage: Store at 2 -8 C (35 -46 F). **Do not freeze**.

Injection Site: Deltoid

Route: Intramuscular (IM)

Needle Size: 20 to 25 gauge, 1 to 1½ inch needle

Administration: Immune response data is not available on the concurrent administration of Boostrix and other vaccines. Boostrix vaccine **must not** be mixed with any vaccine in the same syringe.

Indications: **Boostrix** vaccine is indicated for active booster immunization of individuals **10–18 years of age** for the prevention of tetanus, diphtheria and pertussis. Not recommended for treatment of actual disease.

Schedule: **Five years should elapse between the last dose of DTaP vaccine and administration of Boostrix.** There is no data to support repeat administration of Boostrix**.**

Contraindications:

1.) A known hypersensitivity to any component of tetanus toxoid, diphtheria toxoid or pertussis-containing vaccine reaction after previous administration of a vaccine containing similar components.

2.) Encephalopathy within 7 days of administration of a previous dose of a pertussis-containing vaccine.

3.) Progressive neurologic disorder or uncontrolled epilepsy.

4.) The needleless prefilled syringes contain dry natural rubber latex that may cause allergic reaction in latex sensitive individuals. The vial stopper is latex-free.

5.) If a decision is made to withhold pertussis vaccine, immunization with Td should be given.

References:

Boostrix vaccine package insert, GlaxoSmithKline, (May 2005).

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine – Tdap (Preservative Free)

Manufacturer:	Sanofi Pasteur Inc.
Brand Name:	ADACEL TM
Formulation:	Single dose vials
Dosage:	0.5 ml
Storage:	Store at 2°-8° C (35º-46° F) **Do not freeze**
Injection Site:	Deltoid
Route:	Intramuscular (IM)
Needle Size:	20 to 25 gauge, 1 to 1½ inch needle
Administration:	ADACEL vaccine **must not** be mixed with any vaccine in the same syringe
Indications:	**ADACEL** vaccine is indicated for active booster immunization for the prevention of tetanus, diphtheria and pertussis as a single dose in persons 11 through 64 years of age. Not recommended for treatment of actual disease.
Schedule:	**Five years should elapse between the last dose of DTaP vaccine and administration of ADACEL.** There are no data to support repeat administration of ADACEL
Contraindications:	1. A known hypersensitivity to any component of tetanus toxoid, diphtheria toxoid or pertussis-containing vaccine or a life-threatening reaction after previous administration of a vaccine containing similar components. 2. Encephalopathy not attributable to another identifiable cause within 7 days of administration of a previous dose. 3. Progressive neurological disorder, uncontrolled epilepsy or progressive encephalopathy 4. When a decision is made to withhold pertussis vaccine, Td vaccine should be given.
Reference:	ADACEL vaccine package insert, Sanofi Pasteur Inc. (June 2005)

Rev. 6/05

Hepatitis B Vaccine (Recombinant)

Manufacturer GlaxcoSmithKline

Brand Name Engerix-B

Formulation/Dosage: 10 one-dose vials

Patient age and status \	Pediatric Formulation (Blue Cap) 10mcg/0.5ml	Adult Formulation (Orange Cap) 20mcg/1.0ml
Infant born to HBsAg Positive woman	10mcg/0.5ml	
Infant born to HBsAg Negative woman	10mcg/0.5ml	
1-10 years of age	10mcg/0.5ml	
11-19 years of age	10mcg/0.5ml	10mcg/0.5 ml
Adult ≥ 20 years of age		20mcg/1.0ml

HBIG given simultaneously at a different site within 12 hours of birth.

Storage Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.

Injection Site Anterolateral aspect of the upper thigh or deltoid

Route Intramuscular (IM)

Needle Size 20 to 25 gauge, ⅞ to 1½ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen. **Hepatitis B vaccines made by different manufacturers are interchangeable, except for the 2-dose schedule for adolescents aged 11-15 years.**

Routine schedule for Hepatitis B vaccination of children:

Dose	HBsAg Positive woman*	HBsAg Negative woman**	Minimum Interval
1	Birth	Birth-2 months	Initial visit
2	1-2 months	1-4 months	1 month after first dose
3	6 months	6-18 months	2 months after second dose **and** 4 months after first dose **and** no earlier than 6 months of age

*If mother is HBsAg positive, administer hepatitis B vaccine regardless of infant's weight.

**If mother is HBsAg negative, infant must weigh at least 2000 grams or 4.4 pounds.

Contraindications to Hepatitis B vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Anaphylactic reaction to baker's yeast.

Rev. 12/02

Hepatitis B Vaccine (Recombinant)

Manufacturer Merck

Brand Name Recombivax HB

Formulation/Dosage: 10 one-dose vials

Patient age and status \	Pediatric/ Adolescent Formulation (Yellow Cap) 5mcg/0.5ml	Adult Formulation (Green Cap) 10mcg/1.0ml
Infant born to HBsAg Positive woman	5mcg/0.5ml	5 mcg/0.5 ml
Infant born to HBsAg Negative woman	5mcg/0.5ml	5 mcg/0.5 ml
1-10 years of age	5mcg/0.5ml	5 mcg/0.5 ml
11-19 years of age	5mcg/0.5ml	5 mcg/0.5 ml
Adult ≥ 20 years of age	10mcg/1.0ml	10mcg/1.0ml

HBIG given simultaneously at a different site within 12 hours of birth.

Note: If the suggested formulation is not available, the appropriate dose can be achieved from another formulation, provided the total volume of vaccine does not exceed 1.0ml.

Storage Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze.**

Injection Site Anterolateral aspect of the upper thigh or deltoid

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Route Intramuscular (IM)

Needle Size 20 to 25 gauge, ⅞ to 1½ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen. **Hepatitis B vaccines made by different companies are interchangeable, except for the 2-dose schedule for adolescents aged 11-15 years.**

Routine schedule for Hepatitis B vaccination of children:

Dose	HBsAg Positive woman*	HBsAg Negative woman**	Minimum Interval
1	Birth	Birth-2 months	Initial visit
2	1-2 months	1-4 months	1 month after first dose
3	6 months	6-18 months	2 months after second dose **and** 4 months after first dose **and** no earlier than 6 months of age

*If mother is HBsAg positive, administer hepatitis B vaccine regardless of infant's weight.

**If mother is HBsAg negative, infant must weigh at least 2000 grams or 4.4 pounds.

Contraindications to Hepatitis B vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Anaphylactic reaction to baker's yeast.

Rev. 12/02

Haemophilus Influenzae type B Vaccine (Hib)
Hepatitis B Vaccine (Recombinant)

Manufacturer Merck

Brand Name Comvax

Formulation 10 one-dose vials

Dosage 0.5 ml

Storage Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.

Injection Site Anterolateral aspect of the upper thigh or deltoid

Route Intramuscular (IM)

Needle Size 22 to 25 gauge, ⅞ to 1¼ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for Hib-Hep B combination:*

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks of age or older
2	4 months	1 month after first dose
3	12-15 months	12 months of age

A birth dose of monovalent hepatitis B vaccine remains a part of the infant immunization schedule when COMVAX is used

Contraindications to Hib-Hep B vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Anaphylactic reaction to baker's yeast.

Haemophilus Influenzae type B Vaccine (Hib)

Manufacturer	Sanofi Pasteur
Brand Name	ACT-Hib
Formulation	5 vials of ACT-Hib (1 dose each) and 5 vials of 0.4% Sodium Chloride (1 dose each). ACT-Hib must be reconstituted with 0.6ml of Sodium Chloride.
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for ACT-Hib vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	1 month after first dose
3	6 months	1 month after second dose
Booster*	12-15 months	2 months after third dose **and** no earlier than 12 months of age

*Any Hib conjugate vaccine may be used as the booster dose after a primary series. When possible, the Hib conjugate vaccine used at the first vaccination should be used for all subsequent vaccinations in the primary series. However, any combination of three doses of Hib conjugate vaccines licensed for use among infants will provide adequate protection.

Detailed schedule for Hib vaccination of children:

Age at 1st dose	Primary series	Booster
2-6 months	3 doses, 2 months apart	12-15 months
7-11 months	2 doses, 2 months apart	12-18 months
12-14 months	2 doses, 2 months apart	----------
15-59 months	1 dose	----------

Contraindications to Hib vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine

Haemophilus Influenzae type B Vaccine (Hib)

Manufacturer	Merck
Brand Name	PedvaxHIB (PRP-OMP)
Formulation	10 one-dose vials
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for PedvaxHIB vaccination:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	1 month after first dose
Booster*	12-15 months	2 months after second dose **and** no earlier than 12 months of age

*Any Hib conjugate vaccine may be used as the booster dose after a primary series. When possible, the Hib conjugate vaccine used at the first vaccination should be used for all subsequent vaccinations in the primary series. However, any combination of three doses of Hib conjugate vaccines licensed for use among infants will provide adequate protection.

Detailed schedule for Hib vaccination of children:

Age at 1st dose	Primary series	Booster
2-6 months	2 doses, 2 months apart	12-15 months
7-11 months	2 doses, 2 months apart	12-18 months
12-14 months	2 doses, 2 months apart	----------
15-59 months	1 dose	----------

Contraindications to Hib vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine

Hepatitis A Vaccine (Inactivated)

Manufacturer GlaxoSmithKline

Brand Name Havrix

Formulation Children & Adolescents (Red Cap)-0.5ml contains 720 EI.U.
Adult Formulation (Purple Cap)-1.0ml contains 1440 EI.U.

Dosage

Group	Dose	Formulation
12 months-18 year	720EI.U./0.5ml	Children/Adolescents
19 years & older	1440EI.U./1.0ml	Adults

Storage Refrigerate immediately. Store at 2º-8º C (35º-46º F). Do not freeze**.**

Injection Site Deltoid

Route Intramuscular (IM)

Needle Size 20 to 25 gauge, ⅞ to 1½ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for Havrix vaccination:

ONE dose of 720 EI.U. in 0.5ml given to children 12 months and older. Booster dose given 6-12 months after the primary dose.

ONE dose of 1440 EI.U. in 1.0ml given to adults. Booster dose given 6-12 months after the primary dose.

Contraindications to Hepatitis A vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine
3. Anaphylactic reaction to yeast

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Hepatitis A Vaccine (Inactivated)

Manufacturer Merck

Brand Name VAQTA

Formulation **Children & Adolescents (Purple Cap)**-0.5ml contains 25 U
Adult Formulation (Orange Cap)-1.0ml contains 50 U

Dosage

Group	Dose	Formulation
12 months-18 years	25U/0.5ml	Children/Adolescents
19 years & older	50U/1.0ml	Adults

Storage Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not freeze**.

Injection Site Deltoid

Route Intramuscular (IM)

Needle Size 20 to 25 gauge, ⅞ to 1½ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for VAQTA vaccination:

ONE dose containing 25 U in 0.5ml given to children 12 months-18 years.
Booster dose containing 25 U in 0.5 ml given 6-18 months after the primary dose.

ONE dose of 50 U in 1.0ml given to adults. Booster dose given 6-12 months after the primary dose.

Contraindications to Hepatitis A vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine
3. Anaphylactic reaction to yeast

Measles-Mumps-Rubella Vaccine (MMR-Live)

Manufacturer	Merck
Brand Name	MMR II
Formulation	10 one-dose vials which must be reconstituted with 0.7ml of diluent
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F) or at freezer temperature. **Protect from light at all times**, since such exposure may inactivate the virus. Diluent may be stored at 15º-30º C (59º-86º F) room temperature. **Do not freeze.**
Injection Site	Deltoid
Route	Subcutaneous (SC)
Needle Size	23 to 25 gauge, ⅝ to ¾ inch
Administration	May be administered simultaneously or at any interval between doses containing inactivated antigens. Must have at least a 4 week interval if not administered simultaneously with Varicella vaccine.

Routine schedule for MMR vaccination of children:

Dose	Customary Age	Minimum Interval
1	12-15 months	After 12 months of age
2	4-6 years	1 month after first dose

Contraindications to MMR vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Immunosuppression*
4. Pregnancy
5. Receipt of antibody-containing blood products
6. Anaphylactic reaction to neomycin

*MMR should be considered for asymptomatic HIV patients.

Varicella Virus Vaccine (Live)

Manufacturer Merck

Brand Name Varivax

Formulation 10 one-dose vials which must be reconstituted with 0.7ml of diluent

Dosage 0.5ml

Storage Maintain continuously frozen at an average temperature of -15º C (5 F) or colder. If unconstituted vaccine is left out, clearly mark the vial, place in the freezer, and contact Merck at 1-800-9VARIVAX (1-800-9-827-4829) for instructions. Varivax must be used within 30 minutes of reconstitution.

Injection Site Deltoid

Route Subcutaneous (SC)

Needle Size 23 to 25 gauge, ⅝ to ¾ inch

Administration May be administered simultaneously or at any interval between doses containing inactivated antigens. Must have at least a 4 week interval if not administered simultaneously with MMR vaccine.

Should a second dose of varicella vaccine be indicated for children aged *12 months-12 years* (e.g. during a varicella outbreak), at least 3 months should elapse between administration of any 2 doses of varicella-containing vaccine, including single antigen varicella vaccine or MMRV vaccine.

Routine schedule for Varicella vaccination of children:

Dose	Customary Age	Minimum Interval
1	12-15 months	3 months for children aged 12 months-12 years
2	4-6 years	3 months for children aged 12 months-12 years

* ACIP recommends Varicella vaccine for use in susceptible persons following exposure to Varicella. Varicella vaccine is effective in preventing illness or modifying Varicella severity if administered within 3 -5 days of exposure.

Contraindications to Varivax vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Immunosuppression
4. Pregnancy
5. Receipt of antibody-containing blood products
6. Anaphylactic reaction to neomycin

Revised 07/06

Measles, Mumps, Rubella and Varicella (Live Vaccine) (Preservative Free)

Manufacturer: Merck & Co., Inc

Brand Name: ProQuad®

Formulation: 10 one-dose vials which must be reconstituted with supplied diluent

Dosage: 0.5 ml

Storage: Place vaccine in **freezer** immediately upon receipt. Store at 5° F (-15° C)
Diluent should be stored separately at room temperature 68º-77°F (20º-25° C) or in a refrigerator 36º-46° F (28° C). **Do Not Freeze Diluent**

Injection Site: Upper outer triceps of the arm or Anterolateral fatty tissue of the thigh

Route: Subcutaneous (SubQ)

Needle Size: 23 to 25 gauge, ⅝ to ¾ inch

Administration: May be administered simultaneously or at any interval between doses containing inactivated antigens. **Administer immediately after reconstitution.** Discard if reconstituted vaccine is not used within 30 minutes. Do not freeze reconstituted vaccine.

Routine schedule for MMRV vaccination of children:

Dose	Indication	Age range
1	When the first dose of MMR and Varicella vaccines is indicated	12 months—12 years only
2.	When the second dose of MMR is indicated **and** either The first or second dose of Varicella vaccine is indicated.	

At least 1 month should elapse between a dose of measles containing vaccine, such as MMR vaccine, and a dose of MMRV vaccine. Should a second dose of varicella vaccine be indicated for children aged 12 months—12 years (e.g. during a varicella outbreak) at least 3 months should elapse between administration of any 2 doses of varicella-containing vaccine, including single antigen varicella vaccine or MMRV vaccine.

Contraindications to MMRV vaccination:

1. Moderate to severe illness (child appears ill).
2. Anaphylactic reaction to neomycin
3. Hypersensitivity to any component of the vaccine including gelatin and egg allergy
4. Pregnancy
5. Receipt of antibody-containing blood products
6. Immunosuppression*

*MMRV vaccine should not be administered as a substitute for the component vaccines when vaccinating children with human immunodeficiency virus (HIV) infection until revised recommendations can be considered for the use of MMRV vaccine in this population

Reference: MMWR Vol 54NoMM47; 1212; ProQuad® package inset –Merck & Co., Inc. 08/05

Rev. 7/06

Pneumococcal Conjugate Vaccine (PCV7)

Manufacturer	Wyeth
Brand	Prevnar
Formulation	5 one-dose vials
Dosage	0.5 ml
Storage	Refrigerate @ 2E- 8EC (36E- 46E) Do Not Freeze
Injection Site	Vastus Lateralis or Deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1 1/4 inches

Age at first Vaccination	**No shortage****	**Moderate Shortage**	**Severe Shortage**
<6months	2,4,6 and 12-15 months	2,4, and 6 months (defer 4th dose)	2 doses at 2-month interval in 1st 6 months of life (defer 3rd and 4th doses)
7-11 months	2 doses at 2-month interval; 12-15 month dose	2 doses at 2-month interval; 12-15 month dose	2 doses at 2-month interval (defer 3rd dose)
12-23 months	2 doses at 2-month interval	2 doses at 2-month interval	1 dose (defer 2nd dose)
>24 months	1 dose should be considered	No vaccination	No vaccination

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High Risk 24-59 months*	2 doses 1 dose of PPV23	8 weeks between doses at least 2 months after last dose of PCV7

*** Recommendations do not include children who have undergone bone marrow transplant.**

High Risk Children:
•< 24 months of age
•Sickle cell disease or anatomic asplenia
•HIV infection
•chronic illness
•Weakened immune system
•African American, American Indian or Alaskan Native descent
•Attend daycare for more than 4 hour per week

ACIP recommends the routine use of PCV7 for all children 23 months and younger, and for children 24-59 months of age who are of high risk for pneumococcal disease.

Contraindications to vaccination:
1.Allergy to one of the vaccine components
2.Acute, moderate or severe illness with or without a fever.

** The vaccine schedule for no shortage is included as a reference. Providers should not use the no shortage schedule regardless of their vaccine supply until the national shortage is resolved.

Rev. 3/02

Influenza Vaccine

Manufacturer	Sanofi Pasteur
Brand Name	Fluzone (Split Virus)
Formulation	10-dose vial
Dosage	0.25 ml or 0.50 ml
Storage	Refrigerate immediately. Store at 2º-8º C (35º-46º F). **Do not Freeze.**
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, ⅞ to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with killed or live antigen.

VFC funding is provided only for those infants/children who meet the CDC high-risk criteria.

CDC High- Risk criteria for infants/children:

1. All children aged 6-23 months
2. Long-term heart or lung problems including asthma
3. Renal dysfunction
4. Cystic Fibrosis
5. Chronic metabolic diseases including diabetes
6. Anemia
7. Hemaglobinopathies or immunosuppression (including immunosuppression caused by medications or by HIV)
8. Long-term-aspirin therapy
9. Household member of persons in high-risk groups (infants/children who are most likely to transmit influenza to high-risk persons).

Detailed schedule for Fluzone vaccination of children

Dose	# of Doses
0.25 ml	1 or 2**
0.50 ml	1 or 2* *
0.50 ml	1
0.50 ml	1

Contraindications to Influenza vaccination:

1. Infants/children with a severe allergic reaction to a previous dose of influenza vaccine
2. Infants/children with sensitivity to a vaccine component (eggs)
3. Infants/children with acute febrile illness, until their symptoms have abated.

Precautions:

Infants/children who developed Guillain-Barré syndrome (GBS) within 6 weeks of a previous influenza vaccination

*May be used beginning at 6 months of age**Two doses administered at least 1 month apart are recommended for children < 9 years of age, **who are receiving influenza vaccine for the first time.**

Rev. 9/05

Influenza Virus Vaccine Live, Intranasal

Manufacture	MedImmune
Brand Name	FluMist
Formulation	10 pre-filled single-use sprayers (0.5 mL
Dosage	0.25 mL in each nostril
Storage	Store in either a manual-defrost freezer or in a frost-free freezer. Must be stored at temperatures at or below –15°C (-5°F) continuously
Injection Site	N/A
Route	Intranasal only
Needle Size	N/A
Administration	Should not be administered concurrently with other vaccines or influenza antiviral agents

VFC funding is provided only for those children who meet the ACIP criteria.

Detailed schedule for FluMist administration of <u>Healthy</u> children/adolescents 5 years through 18 years of age

Age Group	Number of Doses	Route
5-8 years no previous influenza vaccine	2 (separated by 6-10 weeks)	Intranasal (0.25 mL in each nostril)
5-8 years previous influenza vaccine	1	Intranasal (0.25 mL in each nostril)
9-18 years	1	Intranasal (0.25 mL in each nostril)

Contraindications to FluMist administration:

1. Severe allergic reaction to a vaccine component (e.g.egg) or following a prior dose of vaccine
2. Receiving aspirin therapy or aspirin-containing therapy.
3. History of Guillain-Barre' syndrome.
4. Suspected immune deficiency.
5. Altered or compromised immune status as a consequence of treatment with systemic corticosteroids, alkylating drugs, antimetabolities, radiation or other immunosuppressive therapies.
6. Asthma or reactive airway disease.
7. Pregnancy

Precautions:

1. FluMist recipients should avoid close contact (within the same household) with immunocompromised individuals for at least 21 days.
2. FluMist administration should be postponed until after the acute phase (at least 72 hours) of febrile and/or respiratory illnesses.

Rev. 9/05

Meningococcal (Groups A, C, Y and W-135) Polysaccharide Diphtheria Toxoid Conjugate Vaccine - MCV4 (Preservative Free)

Manufacturer: Sanofi Pasteur

Brand Name: Menactra

Formulation: Single dose vials

Dosage: 0.5ml

Storage: Store at 2º-8º C (35º-46º F). **Do not freeze**.

Injection Site: Deltoid (preferred region)

Route: Intramuscular (IM)

Needle Size: 20 to 25 gauge, 1 to 1½ inches

Administration: May be administered simultaneously or at any interval between doses of inactivated or live antigens. Menactra vaccine **must not** be mixed with any vaccine in the same syringe. Therefore, separate injection sites and different syringes should be used in case of concomitant administration.

Indications: Menactra vaccine is indicated for active immunization of adolescents and adults **11–55 years of age** for the prevention of invasive meningococcal disease caused by *N meningitidis* serogroups A, C, Y and W-135.

Menactra vaccine is not indicated for immunization against diphtheria.

Schedule: The need for, or timing of, a booster dose of Menactra vaccine has not yet been determined.

Contraindications:

1.) A known hypersensitivity to any component of Menactra vaccine including diphtheria toxoid, or a life-threatening reaction after previous administration of a vaccine containing similar components.

2.) A known hypersensitivity to dry natural rubber latex.

Reference: Menactra vaccine package insert, Aventis Pasteur, (January 2005). "Prevention and Control of Meningococcal Disease", MMWR; CDC, (May 27, 1995 / 54 [RR07]; 1-21).

Rev. 4/05

Rotavirus Vaccine, Live, Oral, Pentavalent
RotaTeq

Manufacturer Merck

Brand Name RotaTeq

Formulation Individually pouched single-dose tube

Dosage 2ml

Storage Refrigerate immediately. Store at 2-8 ° C (35-46 ° F). **Do not freeze**

Route Oral use only (Gently squeeze liquid into infant's mouth toward the inner cheek until dosing tube is empty).

Administration **The first dose should be initiated for infants between 6 weeks and 12 weeks of age because of insufficient data on the safety of the first dose of the vaccine in older infants.** The vaccine may be administered simultaneously or at any intervals between doses of inactivated antigen. The last (third) dose should be administered by 32 weeks of age.

Dosage Intervals

Age (Dose 1)	Dosing Interval (Dose 1 to 2)	Dosing Interval (Dose 2 to 3)
6-12 weeks	4 – 10 weeks	4 – 10 weeks

Contraindications
1. Serious allergy to vaccine components or previous dose of vaccine

Precautions
1. Moderate to severe acute gastroenteritis
2. Moderate to severe illness
3. Pre-existing chronic Gastro Intestinal disease
4. Previous history of intussusception (IS)
5. Altered immunocompetence including infants who have received a blood transfusion or blood products, including immunoglobulin within 42 days.

Special Situations
* Premature infants (<37 weeks gestation), immunize if they are 1) at least 6 weeks of age, 2) clinically stable, 3) are being or have been discharged from nursery
* Protection of immunocompromised household member(s) from exposure to wild virus if infant living in household with immunocompromised person(s).
* Readministration not recommended if infant regurgitates, spits out or vomits during or after administration of vaccine dose.
* Infants living in household with pregnant women can be vaccinated
* If recently vaccinated child is hospitalized for any reason, no precautions, other than routine universal precautions need be taken to prevent the spread of vaccine virus in the hospital setting.